COMPLETE LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method of producing hollow microporous particles in particular intended to be inhaled or any other application characterised in that:

- a composition is provided in a given form comprising at least one active principle and at least one expansion agent having an expansion coefficient greater than 5% and which has a volume after cooling below the solidification point which is greater than the volume before cooling,
- said composition is cooled at a temperature below the solidification point of said at least one expansion agent so as to increase the volume of the given form and to create fractures in the surface and/or in all of said given form by at least the escaping of the expansion agent from the composition, thereby enabling the structure of the hollow micro-porous particle to be obtained,
- all or part of said at least one expansion agent is removed,and

wherein the hollow microporous particles comprise active principle up to about 100%.

2. (previously presented) A method as claimed in Claim 1, wherein said composition in a given form is sprayed onto a cold medium having a temperature lower than said solidification point of said at least one expansion agent.

3. (canceled)

4. (previously presented) A method as claimed in in claim 1, wherein said at least one expansion agent is selected from the group consisting of methanol, dichloromethane, acetone, and mixtures thereof.

5. (previously presented) A method as claimed in claim 1, wherein said at least one expansion agent is selected from the group of gas consisting of carbon dioxide, nitrogen, carbonate, bicarbonate, and carboxylic acid.

6. (previously presented) A method as claimed in claim 1, wherein said active principle is selected from the group consisting of proteins, lipids, nucleic acid, short chain peptide, corticosteriods, anti-inflammatories, analgesics, anti-neoplastic agents or bronchodilators.

7. (previously presented) A method ~~d~~ as claimed in claim 1, wherein said active principle is a steroid selected from the group consisting of budesonide, testosterone, progesterone, oestrogen, flunisolide, triamcinolone, beclomethasone,

betamethasone, dexamethasone, fluticasone, methyl-prednisolone, prednisone and hydrocortisone.

8. (previously presented) A method as claimed in one of Claim 7, wherein the active principle is beclomethasone dipropionate (BDP).

9. (previously presented) A method as claimed in Claim 6, wherein said active principle is a bronchodilator selected from the compounds ephedrine, adrenaline, fenoterol, formoterol, isoprenaline, metaproterenol, phenylephrine, phenylpropanolamine, perbuterol, reproterol, rimeterol, salbutamol, salmeterol, formorterol, terbutaline, isoetharine, tulobuterol, orciprenaline or (-)-4-amino-3,5-dichloro- α[[[6-[2-(pyridinyl)ethoxy}hexyl]amino]methyl]benzenemethanol.

10. (previously presented) A method as claimed in Claim 9, wherein said active principle is salbutamol sulphate.

11. (previously presented) A method as claimed in Claim 2, wherein the spraying step is carried out by atomising said composition in the form of droplets.

12. (previously presented) A method as claimed in claim 1, wherein atomisation is carried out using pneumatic means, ultrasonic means, pressurized

means, nozzle means, rotary atomiser means, blowing means, high rotational generators, spraying devices, gauge needles or a hair-dryer.

13. (previously presented) A method as claimed in claim 1, wherein the atomization gas is selected from the group consisting of carbon dioxide, nitrogen, argon, oxygen, air and mixtures thereof.

14. (previously presented) A method as claimed in claim 1, wherein the cooling step is carried out by means of a gas selected from the group consisting of liquid hydrogen, liquid nitrogen, liquid oxygen.

15. (previously presented) A method as claimed in claim 1, wherein furthermore said particles are dried using blowing means, oven, vacuum oven, fluid bed dryer.

16. (previously presented) A method as claimed in claim 15, wherein the drying step comprises the evaporation of said at least one expansion agent.

17. (previously presented) A method as claimed in claim 15, wherein the drying step comprises the lyophilisation of the particles.

18. (previously presented) A method as claimed in claim 1, wherein the composition comprises a mixture of acetone and water in a ratio of 80:20 volume/volume.

19. (previously presented) A method as claimed in claim 1, wherein the composition further comprises at least one additional excipient.

20. (previously presented) A method A method as claimed in claim 19, wherein said at least one additional excipient is a polymer compound permitting the density to be altered and the action of said at least one active principle to be slowed, controlled or targeted.

21. (previously presented) A method as claimed in claim 19, wherein said at least one additional excipient is selected from the following compounds: cyclodextrins, sodium caseinate, DPPC, serum albumin, cellulose acetate phthalate, phospholipids, hydroxypropyl methylcellulose phthalate, ethyl cellulose, hydroxypropyl methyl cellulose, hydroxyethyl cellulose, hydroxypropyl cellulose, hydroxyethyl cellulose, carboxymethyl cellulose, methyl cellulose, cellulose acetate butyrate, poloxamer, poly(lactic acid), poly(lactic glycolic acid), poly(lactide), poly(glycolide), poly(lactide-coglycolide), poly(p-dioxanone), poly(caprolactone), polycarbon, polyamide, polyanhydride, poly(alkylene alkylate), polyamino acid, polyhydroxyalkanoates, polypropylenefumarates, polyorthoester, polyacetal,

polyacrylamide, polycyanoacrylate, polyalkylcyanoacrylates, polymethapolyphosphate ester, polyphosphazene, polyurethane, polyacrylate, polymethacrylate, poly(methyl methacrylate), poly(hydroxy ethyl methacrylate-co methyl methacrylate, carbopol 934, ethylene-vinyl acetate and other substituted acyl cellulose acetates, polystyrene, polyvinyl alcohol, polyvinyl pyrrolidone, polyvinyl chloride, polyvinyl fluoride, poly(vinyl imidazole), chlorosulphonated polyolefin, polyethylene, polyethylene glycol, polypropylene, polyethylene oxide, copolymer and blends thereof, cellulose acetate phthalate (CAP), hydroxypropyl cellulose acetate phthalate, polymeric medicines or genetically engineered polymers.

22. (previously presented) Hollow microporous particles produced by the method as claimed in claim 1, having particles measuring between 0.1 µm and 2000 µm and whose density is in the range from 0.4 g/cm^3 to 0.0001 g/cm^3.

23. (previously presented) A medicine, intended to be administered by inhalation, having the microporous particles as claimed in claim 22.

24. (Currently Amended) A method of treating ~~Use of hollow microporous particles in the production of a medicine for treating~~ respiratory diseases~~, wherein the particles have been produced by a method characterized in that:~~ comprising:

administering a medicine of a hollow microporous particles to a patient, wherein the particles have been produced by a method characterized in that a

composition is provided in a given form comprising at least one active principle and at least one expansion agent having an expansion coefficient greater than 5% and which has a volume after cooling below the solidification point which is greater than the volume before cooling,

said composition is cooled at a temperature below the solidification point of said at least one expansion agent so as to increase the volume of the given form and to create fractures in the surface and/or in all of said given form, thereby enabling the structure of the hollow micro-porous particle to be obtained, and

all or part of said at least one expansion agent is removed.

25. (previously presented) An inhalation device having the hollow microporous particles obtained by the method as claimed in claim 1.